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KNOWLE.

[Knowle House and Park, Kent.]

THE ancient manor-house of Knowle is situated in an extensive park, near the pleasant town of Sevenoaks, in Kent, and is deeply interesting not only from its antiquity and the air of primitive grandeur that reigns throughout the domain, but from the memories of the distinguished men who have found a home beneath its roof, and from its possession of so many of those great creations of the pencil which are a wonder and a delight to all ages.

The date of the erection of the earliest part of the mansion is unknown. In the time of King John, Baldwin de Bethun possessed the manor, and from him it passed successively into the hands of the Mareschals, earls of Pembroke, and the Bigods, earls of Norfolk. In the reign of Edward I., Otho de Grandison was its lord, and by his successors it was conveyed to Geoffrey de Say, "admiral of all the king's fleets." Ralph Leghe appears to have been its next owner, by whom it was sold, in the reign of Henry VI., to James Fienes, who was connected by marriage with its former possessors the Says. He was a soldier who had distinguished himself in the war with France under Henry V., and was by Henry VI. summoned to parliament as Baron Say and Se le. Honours came thick upon him: he was successively appointed governor of Dover Castle, warden of the cinque ports, chamberlain, and ultimately treasurer, of England. These dignities were dearly purchased by the ill-will and hatred of the people. When the rebellion, headed by Jack Cade, broke out, foremost among the nobles most obnoxious to the rebels was their own countryman Lord Say. He was accordingly committed to the Tower, probably for the double purpose of ensuring his safety, and gratifying, by the appearance of the king's disapprobation, those who were clamouring for his blood. He was however taken from thence by Cade, and after a kind of trial in the Guildhall, his head was struck off. Our readers will remember the scene in Shakspere's Henry VI. illustrative of this tragedy, and the touching yet dignified defence of the doomed nobleman. Under

other circumstances, the reasons given by Cade for his savage determination would be irresistibly ludicrous. He says to Lord Say, "Thou hast most traitorously corrupted the youth of the realm in erecting a grammar-school; and whereas, before, our forefathers had no other books but the score and the tally, thou hast caused *printed* to be used; and, contrary to the king, his crown and dignity, thou hast built a paper-mill!" But a little time before, Cade had defeated the king's troops, and put their leaders to the sword, in the immediate neighbourhood of Knowle, Lord Say's mansion.

In the civil wars the next Lord Say was compelled to sell Knowle to Thomas Bourchier, archbishop of Canterbury. In the sale was included all the "tymbre, wood, ledde, stone, and breke" then lying in a quarry at Seale, intended probably by Lord Say for the rebuilding of the mansion; and to which purpose the materials would doubtless be applied by the archbishop, who, says Hasted, in his 'History of Kent,' rebuilt the manor-house, enclosed a park round it, and left it (a magnificent bequest) to his successors in the see. By two of these, Morton and William of Wareham, the structure was enlarged and beautified. Kings Henry VII. and VIII. each visited Knowle during this period. In the reign of the latter, Cranmer gave up Knowle to the rapacious monarch. In the second year of the reign of Edward VI. it was granted to the protector Somerset, and, after his execution, to one no less unfortunate, the Duke of Northumberland, the relative of Lady Jane Grey. By Queen Mary it was granted to Cardinal Pole, "to hold during the term of his natural life, *and one year after*, as he should by his last will determine." The cardinal dying (on the same day as his royal mistress) intestate, Knowle again became the property of the crown, and was granted by Elizabeth to her favourite the Earl of Leicester. By him it was surrendered back, in a few years, to the donor, though not before he had granted a lease for a term of years. At the expiration of the lease, Knowle came into the possession of the family to which it has ever since belonged, the Sackvilles, to one of whom, Thomas Sackville, a distinguished poet and statesman, the reversion had been previously granted. He was the author of the first regular tragedy in our language, 'Gorboduc,' which was exhibited by the students of the Temple he then belonged to, as one of their Christmas entertainments. It was again exhibited in 1561, before Queen Elizabeth. He was also the author of two poetical pieces in the 'Mirror for Magistrates,' of which the editor of the 'Pictorial History of England' says, "they evince a strength of creative imagination which had been unknown to the English Muse since the days of Chaucer; and the Induction especially, which is throughout a splendid gallery of allegorical paintings, entitles Sackville to the renown of having had no small share in lighting the way to the greatest painter in our own or any other poetry—the divine Spenser." These poems were composed whilst the author was yet but Thomas Sackville, afterwards to become, by Elizabeth's favour, Lord Buckhurst, and ultimately the first Earl of Dorset. Two anecdotes, illustrative of the pride of Sackville's character, have been recorded, though on no very certain testimony. He had spent, principally in an embassy to France, so much of his fortune by what Fuller calls his "magnificent prodigality," as to be compelled to borrow of a certain city alderman, who on one of Sackville's visits kept him waiting a considerable time. The indignity at once reclaimed him from his expensive habits. The other circumstance is in relation to his imprisonment in his own house, by the queen's commands, for nine or ten months. He had been sent into the Low Countries to examine the truth of the charges made against the Earl of Leicester, from whence he was recalled by the influence of the latter, and disgraced as we have mentioned. During this confinement, it is said he would not allow his wife or any member of his family to see him. The death of his enemy restored him to Elizabeth's favour, and on Burleigh's death he was appointed to the high office of lord-treasurer.

In 1613 a considerable portion of the house was burnt down. In the Commonwealth the estate and mansion were sequestrated by Cromwell, who held a court here (it is said, in the present dining-parlour) for the purpose. Our space will only permit us to notice another of the lords of Knowle—Charles Sackville, Earl of Dorset, the wit, the poet, and the libertine of the court of Charles the Second, the Mecænas of his time, whom Dryden and Butler, Wycherley and Congreve at home, and St. Evremond and La Fontaine abroad, alike praised for his taste and judgment, his elegance and his generosity. The latter quality, we fear, had undue weight with at least one, the greatest of his admirers, when we consider the apparent delicacy but real grossness of the compliment paid to him by Dryden, who, having undertaken to produce authors of our own country superior to those of antiquity, observed, "I would instance your lordship in satire, and Shakspere in tragedy!" We have somewhere read a pleasanter anecdote of the same parties. The company they were in, disputing as to which could write the best impromptu, agreed each to try, and chose Dryden as the judge. All but the Earl of Dorset seemed to take great pains; he carelessly scrawled a few words, and threw the paper upon the table. The effusions being examined, Dryden observed he thought the company would unanimously agree with him that nothing could surpass the earl's, which he begged to read: "I promise to pay Mr. John Dryden, or order, five hundred pounds, on demand. DORSET."

Of the magnificent state kept up in the good old days of Knowle, we may have some conception from a catalogue of the household and family of Richard, earl of Dorset, about 1620, given in Bridgman's account of the mansion. From this it appears that for a considerable period there sat at the lord's table eight persons; at the parlour-table twenty-one, including ladies in waiting, chaplain, secretary, pages, &c.; at the clerks' table in the hall twenty, consisting principally of the heads of the different domestic departments; at the nursery-table four; at the long table in the hall forty-eight inferior servants; at the laundry-table twelve, and in the scullery six.

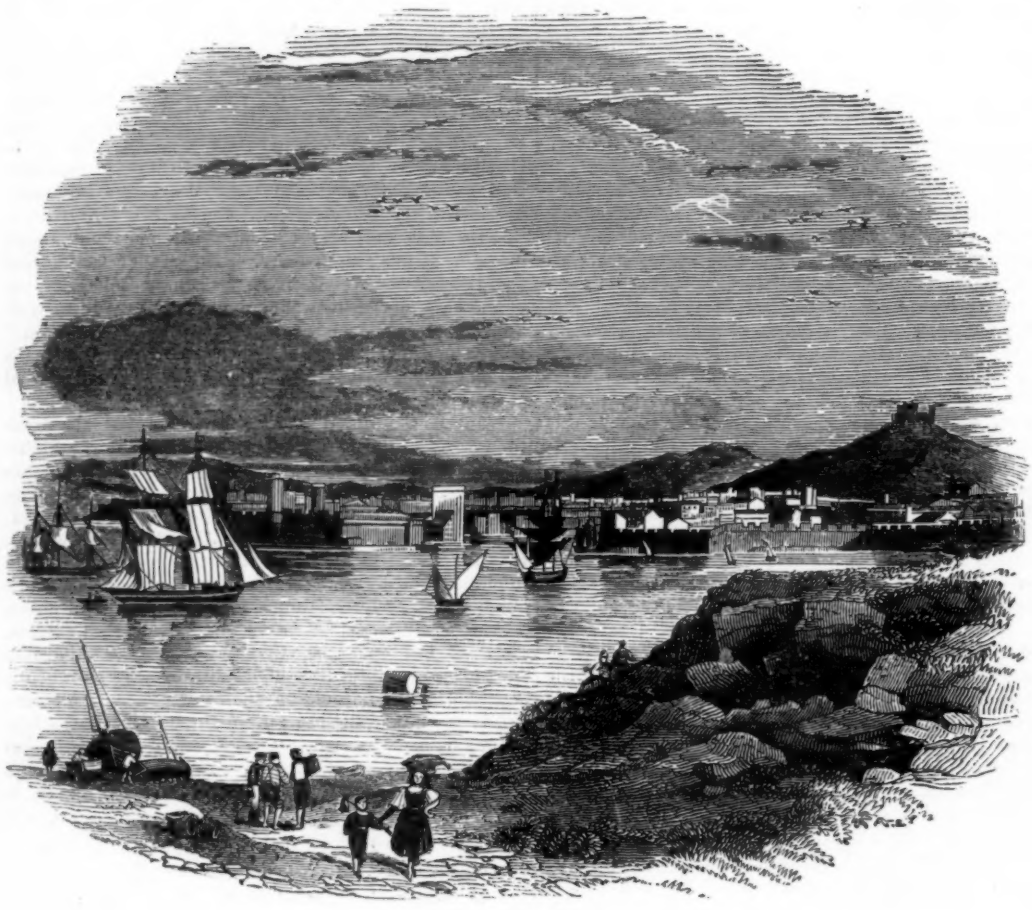
The house stands in a park distinguished for the richness of its turf, and the stately grandeur of its oaks, its beeches, and its chestnuts. Its extent is considerable, being above five miles in circumference. The plantations are dispersed in broad and spacious masses. Deer noted for their fine flavour dart nimbly and shyly to and fro. The surface, here smooth and level, there broken and undulating, is everywhere beautiful; and the eye, charmed with the green luxuriance around, almost forgets to look for the greater attraction that brought it hither. But soon the mansion breaks upon the view; we think (and step eagerly along the while) of its age and its pictures, of the Says, the Cranmers, and the Sackvilles. The front is now before us. Two lofty embattled towers guard the gate of entrance in the middle, and on either side are spacious wings pierced with three stories of windows. The parts are plain, but the whole is imposing; and this character generally pervades the mansion. The principal buildings, in addition to the two fronts with their embattled gateways, are in the form of a large quadrangle, with a smaller one behind, relieved in the mass by numerous square towers, the architecture being chiefly in the castellated style. In the quadrangle are casts from the Gladiator and the Venus. The lofty and extensive Gothic hall, with its characteristic-looking table fitted for the playing the old English game of shuttle-board, its richly carved screen, its raised dais, and its stained glass, at once makes us centuries older: we not only think of, but feel with, the past. The loneliness seems suddenly to be

broken, the bustle of countless attendants going in and out begins, the tables groan with the profusion of the feast, bright jewels and still brighter eyes begin to sparkle, gorgeous vestments and sacerdotal robes mingle together, the solemn strains of music peal forth—it is some high festival! Alas! of our imagination only, as we are soon convinced by the gentle hint of the domestic at our elbow, which we obey, and move forwards. The noble proportions of the hall may be conceived when we state its size: it is nearly seventy-five feet long, twenty-seven broad, and twenty-seven high. A statue, said to be (we conceive wrongly) of Demosthenes, now claims our attention: it is more characteristic of the calm but earnest philosopher, than the excited and exciting orator. It is considered one of the most perfect works of antiquity we possess; its simple truthfulness of expression delights us, and convinces us we ought to be delighted. There are here pictures by Rubens, Jordaens, and Snyders, and several family portraits. The Triumph of Silenus is one of Rubens' most powerful works: the face of Silenus so richly inebriate, almost ready you could fancy to burst with the purple wine, the satyr leering over Silenus' shoulder, and the general vigour of the piece,—make this painting alone worthy a visit to Knowle. The rude frescoes that decorate the staircase are evidently genuine restorations, and speak much for the directing taste. In the Brown Gallery there is a collection of portraits, the extent of which alone entitles it to be considered most interesting and valuable. There is scarcely a celebrated person of the last two or three centuries whose picture may not be found included. Unfortunately the authenticity of many of the portraits is questionable; as works of art, also, they do not possess any high merit, most of them being considered as indifferent imitations of the style of Holbein. In a dressing-room there are a Venus by Titian, a Salutation by Rembrandt, a Satyr and Venus by Correggio, and a Landscape by Salvator Rosa. The billiard-room contains a fine portrait of Sir Kenelm Digby, by Vandyck, and copies of Titian's wonderful pieces, the Diana and Calisto, and the Diana and Actæon. There are here also a Masquerade Scene by Paul Veronese, a St. Peter by Rembrandt, and a landscape by Poussin. The window is embellished with the picture of a man on horseback, with an inscription to the founder of the Sackville family, who came over with William the Conqueror. In the Venetian bed-room (so called from a Venetian ambassador, Nicolo Molino, having slept in it) is a glorious sketch, by Rubens, of Meleager and the Boar; a portrait of Mrs. Abingdon, by Sir J. Reynolds; and the Death of Cleopatra, by Domenichino. The ball-room contains portraits, among many others, of Edward, the fourth earl of Dorset, and of Ann, the third countess. The former killed Lord Bruce in a duel, in 1613, which was fought under circumstances of the most savagely ferocious nature; there being, for instance, no seconds, lest their interference might restrain the principals from the full and bloody consummation they meditated. The latter we notice as the writer of the following characteristic note to Charles the Second's secretary of state, in answer to a recommendation from him of a person to sit for her borough of Appleby:—"I have been bullied by an usurper, I have been neglected by a court, but I will not be dictated to by a subject. Your man sha'nt stand. Ann,—Dorset, Pembroke, and Montgomery." In the drawing-room is a portrait of a Chinese youth, who came to England to be educated, and was placed at the school of Sevenoaks. Some more great works adorn with their imperishable beauty the walls of this apartment: a Holy Family, by Titian; the same subject, by Paul Veronese; a Post-house, by Wouverman; the Rape of the Wife of Hercules, by Annibal Caracci; a head of Raphael, and a Sibyl by Domenichino, &c. The mere enumeration of such subjects by such painters would suffice to satisfy the lover of art that there must be much to delight him at Knowle. In the dining or poet's parlour are portraits of almost every distinguished poet of our country, a series that alike interests our national pride and our individual love and admiration. But we must pass on more rapidly, merely noticing in our way the chapel-room, with its carved work of our Saviour bearing the cross, said to be of one piece, and to have belonged to Mary Queen of Scots; the organ-room, containing, as we are informed, the first organ ever made (its very primitive construction certainly does not contradict the statement), being a large box with rude finger-keys on the top, outside; the great Cartoon gallery, containing a set of copies of the immortal Cartoons of Raphael; and lastly, the king's bed-room, in which is the gorgeous bed of gold and silver tissue, said to have cost 8000*l.*, and made for King James to rest in one night only. An act of magnificent loyalty! but one which, if it were to be taken by our nobles as a precedent, would doubtless make them wish king's visits, like angels', to be "few and far between." In a colonnade there are some fine pieces of sculpture: a fountain nymph asleep, from Roma Vecchia, and a head of Antinous, from Hadrian's villa, &c.

Quitting the mansion, we once more feel the fresh bracing air of the park playing about our brow. Sight-seeing, however worthy the objects, necessarily fatigues the mind by the continual calls made upon its admiration. Therefore well pleased do we stroll along one of the verdurous paths, careless which we choose, in the certainty of finding all delightful. And what a scene presently breaks upon us! We are on the rising ground that skirts a gentle valley; the green murmuring forest is behind and above, whilst before—woods and heaths, towns and villages, churches and mansions, stretch away toward the distant hills of Hampshire; but above all, reposing on a gentle swell of the ground, making the eye gleam with pleasure but to see it, and the heart reverentially glad but to hear its name, is Penshurst, the home of the Sydneys; fair enough, as we now see it, to have inspired the Arcadia of the poet, and solemn enough, in its gloomier hours, to have cherished the noble daring, the firm resolve, and the unflinching fortitude of the patriot.

The Shepherds of Mont Perdu.—There are places in Mont Perdu, and even near its base, that afford good pasture for sheep. They are in very high regions, and appear the more striking from the desolation in other parts of the district. Hither a few shepherds repair during two or three months of the year. They are particularly careful of their flocks, whose docility is remarkable. Not less so is the good understanding subsisting between the sheep and the dogs. The celerity with which the shepherds of the Pyrenees draw their scattered flocks around them is not more astonishing than the process by which they effect it is simple and beautiful. If they are at no great distance from him, he whistles upon them, and they leave off feeding and obey the call; if they are afar off, and scattered, he utters a shrill cry, and instantly the flock are seen leaping down the rocks, and scampering towards him. Having waited until they have mustered round him, the shepherd then sets off on his return to his cabin or resting-place, his flock following behind like so many well-trained hounds. Their fine-looking dogs, a couple of which are generally attached to each flock, have nobler duties to perform than that of chasing the flock together and biting the legs of stragglers: they protect it from the attacks of the wolves and bears, against whose approach they are continually on the watch, and to whom they at once offer battle. So well aware are the sheep of the fatherly care of these dogs, and that they themselves have nothing to fear from them, that they crowd around them, as if they really sought their protection; and dogs and sheep may be seen resting together, or trotting after the shepherd in the most perfect harmony.—*Murray's Summer in the Pyrenees.*

COMMERCIAL CAPABILITIES OF FRANCE.



[Port of Marseilles.]

Placed in the centre of Europe, between 42° and 51° of latitude, France enjoys many of the principal advantages which stimulate the activity of commerce. The natural productions of the country are diversified by variety of climate. In the north, the soil is most profitably devoted to the cultivation of corn; then, proceeding southward, there is an extensive breadth of country, in which, though the common cereal crops still prevail, the vine and the mulberry are objects of culture; and next we find the maize cultivated in addition to the productions already mentioned; lastly, in the southern departments, the olive and the almond flourish along with the vine and mulberry and Indian corn, and although two harvests can be raised in the year, the inhabitants depend for their supply of grain upon those parts of the country which are more exclusively adapted for the production of grain. The mutual necessities of the opposite extremities of the country would alone suffice to give life to commerce, and there are no formidable difficulties of a physical nature to diminish the activity of traffic between the corn-growers and manufacturers of the north, and the producers of wine and oil of the south. The muleteer, with his train of careful and safe-footed animals, is not, as in Spain, the medium of commercial intercourse. The roads are certainly not good; but no direct toll is levied upon carriages or animals which travel upon them. A glance at the land and water communications which France possesses will afford some idea of the facilities which they are capable of affording to the commerce of the country.

There are 630 roads of the first class, called "Routes Royales," of which only 15,000 miles out of 21,500 miles, their total length, are in a state of repair. They are from 43 to 65 feet wide, and the crown of the road is pitched on nearly 3000 miles of these roads. One of the causes of their imperfect condition arises from the cumbersome system under which they are managed. The "Routes Départementales," or second class of roads, are 1381 in number, and their total length is 22,733 miles. They are kept in repair by the department, and are, generally speaking, in a wretched state. These two classes of roads resemble our mail-coach and cross roads. The parish roads, or "Routes Vicinales," are 468,527 in number; total length 479,464 miles; average length of each about one mile. The expense of keeping them in repair devolves upon each parish: they resemble the lanes and bye-roads of England. Thus the length of the above three classes of roads is 523,646 miles. Add to this 5130 miles, being the length of 133 navigable rivers, and 2290 miles for the canals, and we have 7420 miles as the length of the inland water communication of France.

France, exclusive of Corsica, comprises an area of 200,925 square miles, while the area of England is 50,387, or with Wales 57,812. Thus France is as nearly as possible four times larger than England. In 1829 it was ascertained that we had 18,244 miles of turnpike

roads in England; and the state of our roads is well known to be unrivalled for their smoothness and the absence of hills, every effort having been made to cut through them and to fill up depressions, so as to attain nearly a perfect level. In 1819 a committee of the House of Commons estimated the length of the other roads (cross-roads, we presume) at 95,000, making with the turnpike roads 113,244 miles. For the purpose of inland navigation we have canals whose aggregate length is 2200 miles, and navigable rivers of the united length of 1800 miles, being together more than 4000 miles. It is perhaps scarcely correct to offer in comparison with the whole of France that section only of Great Britain which is so pre-eminently distinguished for its industrial activity; but by adding Scotland and Wales, the proportion in respect to area will be changed from 4 to 1 to 2½ to 1: the distance from the central parts of the country to the coast in Great Britain is so much less than in France as to form a very important feature in estimating the commercial facilities of the two countries. The railway system has made no progress in France, up to the present time, beyond giving birth to magnificent projects; while in England, in the course of the next four years, all the most important commercial towns and manufacturing districts will be closely knit together by these new media of intercourse. At several points the island will be crossed from sea to sea by a railway. Thus the Severn and the Thames will be connected; the Humber and the Mersey; and the Newcastle and Carlisle line stretches across the northern part of England.

France enjoys a finer river system than that of any other country in Europe; and this advantage may account for, and perhaps balance, its want of railways. The basins from which the waters of the great rivers are collected, are four in number, namely: the basin of the Seine, containing 17 departments; the Loire, the largest of these basins, 26 departments; the Garonne, smaller than the basin of the Loire, but larger than that of the Seine in the proportion of 6 to 7, contains 17 departments; the basin of the Rhone contains 16 departments; and that portion of the basin of the Rhine which belongs to France contains 9 departments. Each of these rivers, with its tributaries, bears to the ocean the productions of the most inland parts of the country; and this natural system of internal navigation is rendered more complete by canals which connect the great rivers, and pass from one basin to another, forming one great system for carrying on traffic instead of a series. The river Seine is 470 miles long, and the length of its principal tributary, the Marne, is 268 miles. The Rhone is 525 miles long; the Saône, its principal affluent, 304 miles; the Isère and the Durance, two other affluents, are respectively 190 and 220 miles in length; the Doubs, a feeder of the Saône, is 250 miles long. These rivers, being so near the Alps, are rapid in their course, and their value for the purposes of navigation is diminished accordingly. The Garonne is 360 miles long; and its affluents are the Dordogne, 293; the Lot, 166; and the Tarn, 207 miles in length. The length of the Loire is 600 miles; and its affluents the Allier, Cher, and Vienne are respectively of the length of 250, 215, and 207 miles; the Creuse, an affluent of the Vienne, is 166 miles long.

The Loire and the Rhone are connected by the Canal of the Centre, 73 miles long. The Seine and Loire, in their upper course, are united by the canals of Briare and Loing, each about 34 miles long; and lower down the channel of the latter river, by the canal of Orléans, a branch of the canal of Loing, 45 miles long. The Yonne, a branch of the Seine, is connected with the Saône and the Rhone by the canal of Bourgogne; and by an extension of this line, the union of the Seine with the Rhine is effected. The Yonne is also connected with the Loire by the canal of Nivernois. The Rhone and the Rhine are connected by the Rhone and Rhine canal. Thus a noble river system is extended by artificial means over the whole face of the country. In England it is said that no part of the country is more than fifteen miles from water communication; but we are not able to present the comparison which France offers.

If we examine its coast-line, we also find that France is highly favoured by nature. The length of coast-line on the Atlantic is 130 leagues; on the Channel, 150; and on the Mediterranean, 90 leagues. The six departments on the Channel have an area of 1817 square leagues, and a population of 2183 to each; the area of the five departments on the Atlantic (not including the Gulf of Gascony) is 1715 square leagues, population of each 1500; the area of the five departments on that portion of the Atlantic which comprises the Bay of Biscay (called by the French the Gulf of Gascony) is 2012 square leagues, population to each 1013; and the four Mediterranean departments have an area of 1152 square leagues, and the average population of each is 1028. The area of the twenty maritime departments of France is 6698 square leagues, or one-fourth of the total superficies of the country, while the total population of these twenty departments is about 10,000,000, or nearly one-third of the total population. If a straight line be drawn from one point of the coast to another, and sinuosities avoided, it will be found that out of 2157 miles of frontier, 1188 miles are on the coast, namely, 929 miles on the western and 259 on the Mediterranean coast, the inland frontier being only 969 miles, of which 100 are formed by the Rhine. The facilities of traffic which such an extensive line of coast affords are increased in several instances by canals. Thus the canal of Languedoc, 151 miles long, and one of the finest works of the kind in Europe, connects the Garonne with the Mediterranean, by which means a voyage of several hundred miles round the whole of the Spanish peninsula is avoided. Owing partly to the facilities afforded by this canal the southern departments are supplied with colonial produce at a cheaper rate from Bordeaux than from Marseilles. From Brest to Nantes there is also a canal, 232 miles long, by which the navigation of a dangerous part of the coast is avoided, and in time of war the trade between these two places can be carried on without risk or interruption.

The coast-line of England and Wales extends about 1460 miles, not including sinuosities, but reckoning the latter, the real coast-line probably exceeds three times that amount. In the 'Statistical Account of Scotland,' the sea-coast of the mainland of that portion of Great Britain is stated to be 2500 miles. The coast-line of Ireland exceeds 1000 miles if the bays be included.

Having given an outline of the channels in which the commerce of France flows, and the manner in which it is facilitated by roads, canals, rivers, and an extensive line of coast, the principal seaports and places of traffic next claim attention. Each of the rivers which drain the four great basins of France has its seaport. Hâvre is the entrepôt of Paris and the country comprised within the basin of the Seine. The extensive inland country commanded by the Loire and its tributaries renders Nantes an important seaport; Bordeaux, near the head of the æstuary of the Gironde, and commanding, by the Garonne, the supply of many of the southern departments, is also the great centre of the trade in wine and brandy, which constitute the largest articles of export in the foreign commerce of France. Marseilles is admirably situated for the trade with Spain, Italy, the Levant, Egypt, Tunis, and Algiers, and it derives greater advantages from its favourable position in this respect than from the access which it enjoys with the inland parts of the country by means of the Rhone or other channels of internal navigation.

The weight and value of merchandise bonded in the principal warehousing ports of France, during 1837, were as follows:—

	Tons.	Value.
Marseilles . .	236,000	£6,172,000
Hâvre . . .	126,000	5,804,000
Bordeaux . .	48,000	2,164,000
Nantes . . .	87,000	608,000
Total of the above and all other ports . .	584,800	19,172,000

The ports of Marseilles and Hâvre, it will be seen, received more than two-thirds of the whole of the merchandise bonded in the kingdom in the year 1837. Of the articles warehoused, the largest proportion consists of colonial produce; next animal substances, as hides, wool, silk; then vegetable substances, as cotton, flax, and hemp; and dyes, particularly indigo, with vegetable juices, as oils and gums, constitute the next largest proportion.

Taking the imports of France at 27,000,000*l.*, we may set down 17 millions for raw produce, 4 millions for manufactured products, and 6 millions for unmanufactured produce. About 9 millions of the importations from foreign countries are received by land and 18 millions by sea. The exports amount to about 30,000,000*l.*, of which 22 millions are shipped at the coast, and 8 millions are transmitted by the land frontier. The weight of the cargoes to foreign countries amounted to 2,500,000 tons, of which only 960,000 tons were conveyed in French bottoms. The weight of merchandise in the transit trade in the same year was 29,689 tons, of the value of 5,840,000*l.*, nearly four-fifths of which consisted of silk goods, cotton cloths, raw and thrown silk, woollen cloth, and raw cotton. A considerable proportion of these goods is conveyed by land carriage, stage-coaches being sometimes employed for silks and other articles of value. The weight of merchandise conveyed from one part of the coast to another amounted to 1,746,466 tons in 1837, being one-third less than the weight of goods imported from or exported to foreign countries. The number of tons of merchandise shipped from ports on the Atlantic coast to other ports on the same coast amounted to 1,234,000; and from the Mediterranean ports there were shipped 369,000 tons, the proportion being respectively 74 and 26 per cent. From Atlantic ports to Mediterranean ports 96,000 tons were sent; and from the latter to the former, 95,000 tons. The Atlantic ports most extensively engaged in the coasting-trade are Rouen, exporting 200,000 tons of merchandise; Hâvre, 125,477; Bordeaux, 145,000; Nantes, 63,000; Dunkirk, 40,000; Rochelle, 35,000; Caen, 34,000. Marseilles holds the first rank among the Mediterranean harbours, having exported 174,000 tons of merchandise; Toulon ranks next, for 52,000 tons. The goods and merchandise shipped from the ports on the Atlantic for the Mediterranean are destined for Marseilles, Toulon, and Cette. Those sent from the Mediterranean to the Atlantic ports arrive at Rouen, Hâvre, Bordeaux, Nantes, Rochelle, and Caen. The principal articles of the coasting trade are wood, building materials, corn and flour, salt, wines, brandies, coal, iron, resin, and soap. The commodities supplied by the south are chiefly wines, brandies, and salt; and by the north, corn, flour, seed, oil, and coal.

Marseilles, the great seaport of France on the Mediterranean, was founded six centuries before the Christian era, by the people of Phocea, a Greek colony of Asia Minor. It soon flourished, and its inhabitants formed minor settlements on the coasts of Gaul, Spain, and Italy. From its earliest infancy Marseilles has been an important place of maritime commerce. The soil in its neighbourhood is sterile, and does not bountifully repay the labours of the cultivator. This circumstance, and the advantageous position of Marseilles, naturally diverted the energies of its population to trade. At the present time a fifth of the customs' duties collected in France, or nearly 1,000,000*l.*, is contributed by Marseilles; and its commerce is increasing, the occupation of Algiers by the French having brought the trade with that part of Africa into the hands of the Marseillaise. There are many soap manufactories and tan-yards at Marseilles. The refining of sugar is an important branch of industry. The trade in perfumery and olive-oil is also considerable. The exports of Marseilles consist of colonial produce, brandy, wine, liqueurs, syrups, preserved fruits, capers, anchovies, oil, soap, verdigris, perfumery, madder; manufactured goods, consisting of light woollens, silks, shawls, ribands, gloves, hardware, &c.; and the chief articles of import are sugar, coffee, cotton, indigo, pepper, iron, dye-woods, hides; and when the trade in grain is active, wheat from the Black Sea, Sicily, Italy, and Africa. The harbour is in the heart of the city, capacious and sheltered, but it does not admit vessels of the larger class; and as the accumulation of refuse from the shipping is not carried away by tides (the Mediterranean tides being scarcely perceptible) the port is frequently offensive. The form of the harbour resembles an elongated horse-shoe: the entrance is defended by forts placed opposite each other. The lazaretto occupies an area of above 278,000 square yards, and is considered the finest establishment of the kind in Europe: the quarantine regulations are severe, but a general revision of these laws for the countries on the Mediterranean is likely to take place. The arrivals in the port of Marseilles in the year 1833 were as follows:—

	Ships.	Tonnage.	Men.
Trade with foreign countries	1,155	103,978	8,533
Do. with French colonies	129	31,740	1,840
Fishing trade . .	66	10,794	806
Coasting trade . .	4,091	210,926	19,409
Foreign ships direct .	1,209	170,190	
Do. do. indirect .	551	102,152	
	7,201	629,780	

In the environs of Marseilles there are some splendid sea-views. The population of the town amounted to 146,000 in 1837; and it possesses all the institutions of a French provincial town of the first class.

THE VIRGINAL, THE HARPSICHORD, AND THE PIANO-FORTE.

[Concluded from No. 440.]

IN our former article we gave a brief account of the Clavichord, the Spinet, and the Virginal,—all of which were played upon in a manner nearly similar to the modern piano-forte, and were very similar to one another in construction.

We now proceed to a mode of construction which, under the name of the *Harpsichord*, presented an important improvement upon those before mentioned. It will be remembered that, in the instruments we have hitherto described, there were as many keys as strings, each key acting upon one string only. Now it is very plain to us, that if two notes of the same character and pitch be sounded together, the effect is more intense and brilliant than if one only be sounded: on the same principle that in a chorus a number of voices sing in unison, in order to increase the effect. The same remark, of course, applies to a stringed instrument; and if, by any mechanism, each key of an instrument of the piano-forte class could be made to act upon two unison-strings at once, the effect produced would be double in intensity.

This was the principle which distinguished the harpsichord from its predecessors. There were twice as many strings as keys, each key acting on two strings. The mode of vibration was by a jack and a crow or raven quill, as in former instances; and the general construction was in other cases nearly the same, except that the harpsichord was necessarily larger than the spinet or

virginal. In this form the instrument was called a *single harpsichord*, and was, in effect, a *double spinet*.

But there were also *double harpsichords*, having three sets of strings and two sets of keys. The tuning of the three strings for each note was so arranged, that there should be two unisons and an octave above them, in order to give a variety of character to the tones, and yet keep them in harmony one with another. About the year 1770 a change was made, by bringing all three of the strings to a unison. The reason for this was, that the octave string, or the octave stop, as it was called, was liable to be so much affected by the least change in the temperature of the air, that a change in the direction of the wind was often sufficient to put it out of tune.

Besides arming the tongues of the jacks with crow or raven quills, several other means were tried by which to produce a softer tone, and to keep the instrument longer in tune. Leather and other elastic substances were applied in different ways; but it was found that what the instrument gained in sweetness of tone, by these means, it lost in spirit, for the quills were calculated to produce a very sprightly effect.

The best harpsichords of the last century were made by the family of the Ruckers at Antwerp—by Geronimo at Florence—by Coushette, Jabel, Kirkman, and Shudi. But they were destined to be superseded by an improved construction of instrument, and are now almost unknown.

The improved construction to which we allude was that of the *Piano-forte*, in which the strings are struck with a *hammer* instead of a *quill*. There are two accounts given of the invention of the piano-forte, differing much in their particulars. We see no reason, however, why *both* of them may not be correct, since science and the arts afford abundant instances of two persons living in different countries making similar inventions or discoveries about the same time, and unknown to each other. One account is as follows:—"The piano-forte was invented at Florence about 1711. The first that was brought to England was made by Padre Wood, an English monk at Rome, for an English friend, Mr. Crisp of Chesington. The tone of this instrument was so superior to that produced by quills, with the additional power of producing all the shades of piano and forte by the finger (whence the name of the instrument), that though the touch and mechanism were so imperfect that nothing quick could be executed upon it, yet the 'Dead March in Saul' and other solemn and pathetic strains, when executed with taste and feeling by a master a little accustomed to the touch, excited equal wonder and delight in the hearers. Mr. Fulk Greville purchased this instrument of Mr. Crisp for 100 guineas, and it remained unique in this country for several years."

The other account of the invention is as follows:—"Christopher Gottlieb Schroeter was a native of Hohenstein, on the frontiers of Bohemia. This ingenious man was born in 1699, and having received a good musical education under Schmidt, chapel-master at Dresden, obtained, without solicitation, the place of organist in the principal church of Minden in 1726, and of Nordhausen in 1732, where he remained till his death, in 1782. So early as the year 1717 he made that change in the construction of the harpsichord which brought it under the denomination of the *piano-forte*. He made a model of his invention, and presented it to the court of Dresden in 1721. The hammers which struck the strings recoiled after the blow, and were covered with leather. Some time after this, Mr. G. Silvermann, a musical-instrument maker, began to make piano-fortes for sale, from Schroeter's model." Mr. Capel Lofft has raised some objections to this account; but we have not space to enter into them, and must content ourselves with observing that the piano-forte is generally regarded as a German invention.

Piano-fortes, as made at present, are of three different kinds; the *horizontal grand*, the *cabinet*, and the *square*. In the first the player sits at one end, and the front of the instrument curves or inclines backwards from the end at which the player is seated towards the other end. The cabinet is short but elevated, in consequence of a different arrangement of the internal mechanism of the instrument. In the square piano-forte the keys are arranged along the front, but nearer to one end than the other.

The cabinet and the square piano-fortes have two strings to each note tuned in unison; but the grand has *three*, and it is principally from this circumstance that the grand piano-forte is employed in concerts, where a powerful effect is required to be produced. The groundwork of the instrument is a strong frame, to one end of which the strings are attached firmly, and at the other end the pegs, round which the strings are wound, are inserted. The strain upon this foundation frame is enormous, since every individual wire must be powerfully stretched before its required note can be produced: a slight inspection and trial of the strings of a piano-forte will render this evident. It has been estimated that when all the strings of a grand piano-forte are properly tuned, the strain upon the supporting frame is not less than *thirteen thousand pounds*. The necessity for great strength is therefore evident.

All the strings pass over two bridges, at a certain distance from the ends; and it is the vibration of the length of string between these bridges that produces the tone. It is customary to twist little pieces of cloth about the portions of the strings situated between each end and its adjacent bridge, in order to prevent that portion from vibrating separately. In some cases, however, these pieces of cloth are dispensed with, and, by the addition of two extra bridges, the side portions of the strings are allowed to vibrate.

The strings are usually of steel wire from the upper end of the scale down to the note A on the first space of the base, and all the notes below that are of brass wire. Some of the strings are covered with fine brass or copper wire, wound spirally round, to increase the substance. The original scale of the piano-forte was from double F in the bass to *f* in alt, comprising a compass of 5 octaves; it was then carried three or four notes higher, making the compass 5½ octaves; the base was then carried down to C C C, making six octaves: and lastly the upper notes were extended as far as *f* in altissimo, by which the compass has been finally brought to 6½ octaves, which is, we believe, the utmost that has yet been produced on the piano-forte; indeed, the extreme notes of this widely-extended scale are so slightly musical in their character, that it would answer but little purpose to carry the scale still further: we may well be content with a range of seventy-eight semitones in one instrument.

A very important part of the piano-forte is the *sounding-board*. This is a perfectly smooth and flat piece of Swiss fir, or of white American pine, about one-fifth of an inch in thickness, and extending parallel to the whole range of strings. The object of the sounding-board is to augment the intensity of the sounds emitted by the strings. If nothing but the air of the room communicated between the vibrating strings and the ear, the air would communicate to the ear so much only of the sound as it had received directly from the strings; but if a thin elastic surface be placed near the strings, it is set into vibration by them, and in its turn communicates those vibrations to the air of the room in a powerful manner, by reason of its large surface. Such is the object which the sounding-board of a piano-forte is intended to serve, and without it we should lose much of the power of the instrument.

The part of the mechanism which strikes the string is the *hammer*, which serves the place of the quill used in the harpsichord, &c., and which is formed of leather. This hammer was originally attached to the remote end of the

key; so that when the finger pressed down the outer end, the inner end sprang up, and the hammer attached to it struck the string. But it was found that many disadvantages attended this mode of striking the string, and an ingenious contrivance was adopted by which the remote end of the key acted upon a second lever, which was provided with a hammer, and which was the part that acted on the string. It is in this department of the construction that more changes have been made than in any other. The keys and the strings have remained, comparatively speaking, without great alteration; but the mode of bringing the remote end of the key to act upon the string, in order to give a freedom of action to the player, has engaged the attention of all our most eminent instrument-makers, who have, in some cases, adopted the most elaborate mechanism.

One peculiarity which, among others, distinguishes the piano-forte from the organ, is, the speedy termination of the sound of each note. An organ-player can produce an uninterrupted note of any length he may require by keeping his finger on a key and having the instrument supplied with wind; but a pianoforte-player soon loses the sound of a note, whether his finger remain on the key or not, for the note gradually dies away, and is soon extinct. This circumstance gives to the organ an advantage in some respects. It is, however, desirable that in both cases the sound should cease when the finger is removed from the key; for if one note remained sounding when the next following note is being produced, the two would be heard together, and would be very likely to produce discord. When, therefore, the finger is taken off any particular key, it is desirable that the sound of that note should cease at once by the time another note is produced. To effect this a *damper* is employed for each string. An extremely light body, such as a little piece of wood coated with leather, is allowed to rest on each string: when the key is pressed down, the little damper is lifted up from the string, and this hammer strikes the string, both at the same instant. The removal of the damper allows the string to vibrate; but when the finger is removed from the key, the damper falls again on the string, and at once stops its vibration.

In some particular movements of a piece of music it is often desirable that the notes should reverberate after the key is released from the action of the finger, by which a peculiar kind of richness of effect is produced, although for other movements it would be deemed discordant. To effect this a pedal is pressed, by which the dampers are removed from all the strings, and allow them to vibrate freely. When this movement of the piece of music is concluded, another motion of the pedal restores the dampers to their former position.

It has been said that in the grand piano-forte there are three strings to each note, and two in the cabinet and square pianos. Now, so much of the effect of a piece of music depends on the judicious variation of the intensity of sound produced, that it may well be supposed that manufacturers have been anxious to provide the player with the means of varying the intensity of the sound of the piano-forte. Accordingly, the hammers are so arranged that in their ordinary position they shall strike the whole of the strings; but by placing the foot on a pedal one string of every note is removed from the action of the hammer; so that the grand piano has then but two strings playing to each note, and the cabinet and square pianos have but one. The removal of the foot from the pedal restores to the instrument its full power.

A very complicated species of piano-forte, called the "self-acting," has sprung up within a few years. A barrel, similar to that seen in a musical snuff-box, is studded over with pins in a determined arrangement, and when the barrel is made to revolve by some internal mechanism, the pins catch against the ends of levers which communicate with or strike against the strings, and thus the sounds are elicited. As in the case of the musical snuff-box, the number of tunes is limited by the arrangement of the pins on the barrel. In some of Clementi's self-acting piano-fortes the mechanical powers of the instrument extend to eighteen tunes. There is generally a set of keys, as in a common piano; so that the instrument can also be played in the usual way by the fingers. Messrs. Rolfe have adjusted the levers to the revolving barrel in such a way that dampers can be either applied to or removed from the strings, as may be desired.

There have been one or two contrivances by which the sound of a string can be rendered more continuous, while the finger is on the key. This is by allowing a resined web, or, in another case, a resined film of silk, to rub against the string, somewhat in the manner of a bow against a violin string. But the mechanism must necessarily be very complicated, and we are not aware that it has yet been brought much into use.

Mr. Erard has made made several improvements in what is called the "action" of piano-fortes. There is the "square action," by which the hammer strikes the string very freely and rapidly, but is liable to rebound against it and repeat the note: on the other hand, the "grand action" is such a mode of arranging the hammer that it cannot rebound against the string; but this is counteracted by a heaviness or sluggishness of action, by which the note cannot be sounded unless the key be pressed completely down by the finger. The late Sebastian Erard endeavoured to combine the merits of these two "actions," and to avoid their defects; and from the evidence given by professional persons before a judiciai committee of the Privy Council in 1835, when Mr. P. Erard applied for an extension of the patent, it appears as if that object had been attained.

Almost every eminent pianoforte-maker of the present day has contributed to the improvement of this beautiful instrument. The names of Erard, Broadwood, Clementi, Stodart, Kirkman, &c., are all connected with some improvements or other in the mode of constructing the piano-forte; and there is no reason why this should not continue to be the case, since there are doubtless many things to be desired in the construction. How different are the piano-forte and the violin in this respect! The violin of a Paganini or of an Ole Bull in the present day differs scarcely in any respect from that of a Tartini or a Viotti in the olden time; but a Thalberg or a Hummel would be but little satisfied with a spinet or virginal on which to exercise his powers.

The Sense of Duty.—There is no evil that we cannot either face or fly from, but the consciousness of duty disregarded. A sense of duty pursues us ever. It is omnipresent, like the Deity. If we take to ourselves the wings of the morning, and dwell in the uttermost parts of the sea, duty performed, or duty violated, is still with us, for our happiness or our misery. If we say, the darkness shall cover us—in the darkness, as in the light, our obligations are yet with us. We cannot escape their power, nor fly from their presence. They are with us in this life, will be with us at its close; and in that scene of inconceivable solemnity which lies yet further onward, we shall still find ourselves surrounded by the consciousness of duty, to pain us wherever it has been violated, and to console us so far as God may have given us grace to perform it.—*Webster's Speeches and Forensic Arguments.*

Uncertainty of Life in Africa.—It will scarcely be believed, that not less than one hundred and sixty governors of towns and villages, all belonging to Yarriba, have died from natural causes, or have been slain in war, since I was last here (a period of three years); and that, of the inhabited places through which we have passed, not more than half a dozen chiefs are alive at this moment who received and entertained me on my return to Badágry three years ago.—*Lander's Niger.*

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